

REMARKS

I. Status of the Application

Claims 1-9 are all the claims pending in the application. Claims 1-9 have been rejected. The present Amendment addresses each point of rejection raised by the Examiner. Favorable reconsideration is respectfully requested.

II. Claim Rejections Under 35 U.S.C. § 103(a) - Widdowson

Claims 1, 2, 6, and 7 stand rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Widdowson et al., “Polarisation guiding in ultralong distance soliton transmission,” *Electronics Letters*, Vol. 30, No. 11, 26 May 1994, pages 879-880 (hereinafter “Widdowson”). Applicants respectfully traverse this ground of rejection.

As discussed in the Response filed on April 20, 2007, Widdowson does not teach or suggest “a polarization selective element for separating *from the isolated pulses* at least one component that has a single polarization,” as recited in claim 1. This claim language requires that the polarization selective element be located *behind* the polarization insensitive optical switch, which isolates optical pulses within the pulse train. On the contrary, Fig. 1 of Widdowson shows that the polarizer is located *in front of* the demultiplexer (p. 880, first full paragraph).

Further, Applicants submit that it would not have been obvious to a person of ordinary skill in the art to reverse the order of the polarizer and demultiplexer of the receiver of Widdowson. As discussed in the current specification, isolating the optical pulses before separating the pulses of different polarizations allows a relaxation of the constraints imposed on the OTDM demultiplexer (specification, p. 4, fourth full paragraph). This is because components in the isolated pulses that result from interchannel interference can be largely

eliminated by the subsequent polarization selective element (*Id.* at p. 5, first paragraph). Also, a demultiplexer with a greater switching window can be used, and the extinction ratio of the demultiplexer can be reduced (*Id.*). Therefore, the claimed receiver is structurally different and produces a different result than the receiver of Widdowson.

Nonetheless, the Examiner continues to assert that “[t]he configuration of ... Widdowson et al. produces the same result as would the configuration cited in the claim” (see Office Action at page 3). Further, the Examiner continues to assert that “it would have been obvious ... to modify the teachings of Widdowson et al., such that [the polarization insensitive optical switch] ... is placed[d] before the polarization selective element ... [s]ince it has been held that rearranging parts of an invention involves only routine skill in the art.” *In re Japikse*, 86 USPQ 70. Applicants respectfully disagree for the reasons discussed above. Further, the Examiner’s reliance on *In re Japikse* as establishing a per se rule regarding rearranging parts is improper. “This method of analysis is founded on legal error because it substitutes supposed per se rules for the particularized inquiry required by section 103. It necessarily produces erroneous results.” *In re Ochiai*, 71 F.3d 1565, 1570, 37 U.S.P.Q.2D (BNA) 1127, 1132 (Fed. Cir. 1995). In fact, in *In re Ochiai*, the Court provided a detailed clarification of what it perceived to be a frequent misunderstanding among Examiners.

The use of per se rules, while undoubtedly less laborious than a searching comparison of the claimed invention--including all its limitations--with the teachings of the prior art, flouts section 103 and the fundamental case law applying it. Per se rules that eliminate the need for fact-specific analysis of claims and prior art may be administratively convenient for PTO examiners and the Board. Indeed, they have been sanctioned by the Board as well. But reliance on per se rules of obviousness is legally incorrect and must cease. Any such administrative convenience is simply inconsistent with section 103, which, according to Graham and its progeny, entitles an applicant to issuance of an otherwise proper

patent unless the PTO establishes that the invention as claimed in the application is obvious over cited prior art, based on the specific comparison of that prior art with claim limitations. We once again hold today that our precedents do not establish any per se rules of obviousness, just as those precedents themselves expressly declined to create such rules. Any conflicts as may be perceived to exist derive from an impermissible effort to extract per se rules from decisions that disavow precisely such extraction. (Emphasis added). *In re Ochiai*, 71 F.3d 1565, 1572, 37 U.S.P.Q.2D (BNA) 1127, 1134 (Fed. Cir. 1995).

The Examiner further asserts “that without undue experimentation one of ordinary skill in the art would have reverse[d] the order of operation to pulse isolation then polarization separation; at least for the reasons below: the type of constraints [that are relaxed for the OTDM demultiplexer] are not clearly explained or defined ..., the specification did not clearly disclose the level of improvement that is achieved[, and] there is no support in the specification about a significant improvement, which would require undue experimentation.” (see Office Action at pages 9-10). However, Applicants submit that the Examiner’s rationale is both misplaced and flawed, since none of the above-quoted assertions by the Examiner provides a reason why a person of ordinary skill in the art would have been motivated to reverse the order of the polarizer and demultiplexer of the receiver of Widdowson. That is, each of the Examiner’s assertions is merely an unsupported mischaracterization of the disclosure of the application which in no way addresses why one skilled in the art would have been motivated to modify Widdowson. Therefore, Applicants submit that the claimed invention would not have been rendered obvious in view of Widdowson.

At least by virtue of the aforementioned differences, claim 1 distinguishes over Widdowson. Because claim 6 contains features that are analogous to the features recited in claim 1, claim 6 is patentable over Widdowson for analogous reasons. Further, claims 2 and 7

are dependent claims including all of the elements of independent claims 1 and 6, respectively, which as established above, distinguish over Widdowson. Therefore, claims 2 and 7 are patentable for at least the aforementioned reasons, as well as for their additionally recited features.

III. Claim Rejections Under 35 U.S.C. § 103(a) - Widdowson in view of Heismann

Claims 3-5, 8, and 9 stand rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Widdowson in view of Heismann et al., “Automatic Polarization Demultiplexer for Polarization-Multiplexed Transmission Systems,” *Proceedings of the European Conference on Optical Communications*, Vol. 2, 12 September 1993, pages 401-404 (hereinafter “Heismann”). Applicants respectfully traverse this ground of rejection.

As discussed above, Widdowson fails to teach or suggest a receiver comprising “a polarization selective element for separating from the isolated pulses at least one component that has a single polarization,” as recited in claim 1. Heismann does not remedy this deficiency in Widdowson. Heismann discloses only a polarization demultiplexer for polarization multiplexed transmission systems, and does not isolate optical pulses with a polarization insensitive optical switch. Therefore, Applicants submit that claims 1 and 6 are patentable over Widdowson, Heismann, and their combination.

Claims 3-5, 8, and 9 are dependent claims including all of the elements of independent claims 1 and 6, respectively, which as established above, distinguish over Widdowson and Heismann. Therefore, claims 3-5, 8, and 9 are patentable for at least the aforementioned reasons, as well as for their additionally recited features.

IV. Conclusion

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

Respectfully submitted,



Suzanne C. Walts
Registration No. 60,831

SUGHRUE MION, PLLC
Telephone: (202) 293-7060
Facsimile: (202) 293-7860

WASHINGTON OFFICE
23373
CUSTOMER NUMBER

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